

Proper Timing of Insemination is Important

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Dairy farmers should know and use the following information to get the best results in their A.I. program.

- 1) The length of standing heat is variable, but averages 8-12 hours.
- 2) Ovulation (release of the egg) does not occur until 24 to 32 hours after the start of standing heat ...the average is 28 hours.
- 3) The egg has a fertile life of less than 12 hours after it is released from the ovary.
- 4) Sperm live for an average of 24 hours after they are deposited in the cow's reproductive tract.
- 5) The first 6 hours sperm are inside the cow they undergo a biochemical change called capacitation. Capacitation is necessary for sperm to be able to fertilize the egg.
- 6) The goal is to time insemination so there are many live capacitated sperm cells in the oviducts at the time of ovulation.

While these average figures vary between animals and from one heat cycle to the next, they are a valuable guide to determine the best time to breed.

The time-tested rule for when to breed is the a.m.- p.m./p.m.- a.m. rule:

- 1) A cow observed in standing heat in the morning (a.m. cow) should be bred the afternoon of the same day.
- 2) A cow observed in standing heat in the afternoon or evening (p.m. cow) should be bred the following morning.

The a.m.- p.m./p.m.- a.m. rule is the industry standard, but it is interesting that acceptable fertility has been achieved in herds where insemination is scheduled only one time each day as long as that time is the same time every day. The fertility of cows bred extremely early or extremely late in relation to start of standing heat is compromised by about five percent when insemination is scheduled only one time each day.